

CORRES. CONTROL  
OUTGOING LTR. NO.

DOE ORDER # 4700.1

05-RF-00555

DIST.	LTR	ENC
CROCKETT, G. A.		
FERRERA, D.W.	X	
GILPIN, H. E.		
LINDSAY, D.C.		
LONG, J.		
SHELTON, D.C.		
TUOR, N. R.		

JUN - 7 2005

05-RF-00555

BEAN, C.		
DECK, C.		
FOSS, D.		
FRANCIS, M.		
FREIBOTH, C.	X	X
GEIS, A.		
GIBBS, F.	X	
HUMISTON, T.		
KNAPP, S.		
LAVORATO, K.		
LINSINBIGLER, H.		
MYERS, K.		
NESTA, S.	X	X
NORTH, K.		
OMAN, K.		
PLAPPERT, R.		
PRIMROSE, A.		
RICHARDELLA, R.		
SHULER, K.		
SILLS, S.		
SNYDER, D.P.		
SWARTZ, J.M.		
WARD, D.A.		
WIEMELT, K.		

Gary Morgan, Functional Lead  
Cadre Project Management Division  
DOE, RFPO

RSOP FOR COMPONENT REMOVAL, SIZE REDUCTION, AND DECONTAMINATION  
ACTIVITIES NOTIFICATION LETTER FOR BUILDING 891 COMPONENT REMOVAL, SIZE  
REDUCTION, AND DECONTAMINATION - DWF-045-05

Attached is a draft transmittal letter to the Colorado Department of Public Health and  
Environment for the RSOP notification for Building 891 component removal, size reduction and  
decontamination. The draft transmittal letter has been prepared from DOE RFCA coordinator  
to CDPHE RFCA coordinator.

Please contact Steve Nesta x6386 with questions or concerns.

*Handwritten signature: J. W. Ferrera*

Dennis W. Ferrera  
Vice President and Project Manager  
Remediation, Industrial D&D, and Site Services

Attachment:  
As Stated

KLM:pvt

Orig. and 1 cc - Gary Morgan

CORRES. CONTROL	X	X
ADMIN RECRD/T130G	X	X
TRAFFIC		
PATS/130		

CLASSIFICATION:

UCNI		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER

SIGNATURE:

*Handwritten signature: J. W. Ferrera*  
Date: 06/06/05

IN REPLY TO RFP CC NO.:

ACTION ITEM STATUS:

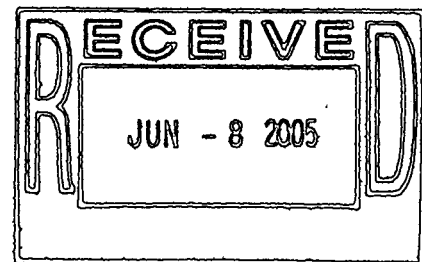
☐ PARTIAL/OPEN  
☐ CLOSED

LTR APPROVALS:

ORIG. & TYPIST INITIALS:

SMN:pvt

RF-46469(Rev.9/94)



ADMIN RECORD

Steven H. Gunderson  
Colorado Department of Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80222-1530

**RSOP FOR COMPONENT REMOVAL, SIZE REDUCTION, AND DECONTAMINATION  
ACTIVITIES NOTIFICATION LETTER FOR BUILDING 891 COMPONENT REMOVAL, SIZE  
REDUCTION, AND DECONTAMINATION**

Mr. Gunderson:

In accordance with the Rocky Flats Cleanup Agreement Standard Operating Protocol (RSOP) for Component Removal, Size Reduction and Decontamination Activities, this letter and its attachments is notification for RSOP implementation. This notification is for all activities required to bring Building 891 to the unrestricted release criteria. This will involve component removal, size reduction and decontamination activities utilizing the methods specified in the RSOP. Additionally, a closure description like document is included to address the RSOP requirement for a Closure Plan that meets the substantive elements of a Closure Description Document.

Kaiser-Hill or a subcontractor will conduct this work. If Kaiser-Hill or the subcontractor would like to use a method or process not included in the RSOP then they are required to notify and, in consultation with DOE/LRA, the RFCA process for decision document modification will be used.

The appropriate checklists and information required by the RSOP are attached to this letter and should provide the necessary information. This work will be conducted in accordance with the work control documentation prepared by Kaiser-Hill or the subcontractor. The exact methods and process selected by Kaiser-Hill or the subcontractor and progress of the activities will be communicated to DOE/LRA through the consultative process, particularly the monthly RISS production meetings. The facility will not be breached during the activity.

As indicated in the RSOP, the LRA has 14 days to review the RSOP notification letter and provide feedback, including a definitive reason for not proceeding with the project. If no feedback is received within 14 days, the project will proceed as planned.

If you have any questions regarding this, please contact me at (303) 966-6246.

John Rampe  
U.S. Department of Energy

## RSOP for Component Removal, Size Reduction, and Decontamination Activities Checklist

<b>Project scope:</b> Building 891 component removal, size reduction, and decontamination		
<b>Facility description:</b> Consolidated Water Treatment Facility		
<b>Description of planned activity(ies):</b> The decontamination, size reduction, and component removal required to bring Building 891 to the unrestricted release criteria.		
<b>Facility/rooms/sets/areas involved:</b> All		
<b>Is RCRA unit closure(s) part of the planned activity?</b>		<input type="checkbox"/> Yes
<b>If RCRA units are included, attach unit specific information sheets and drawings</b>		<input checked="" type="checkbox"/> No*
<b>Attach checklists from Appendix A of the RSOP.</b> <i>Complete checklists by room/set/area/facility, as appropriate</i>	<input checked="" type="checkbox"/>	<b>Component Removal/Size Reduction</b>
	<input checked="" type="checkbox"/>	<b>Decontamination</b>
<b>RLCR Status</b>	<input type="checkbox"/>	<b>RLCR complete and concurrence received: N/A</b>
	<input type="checkbox"/>	<b>RLCR initiated but incomplete; concurrence anticipated: N/A</b>
	<input checked="" type="checkbox"/>	<b>RLC has not been initiated<sup>1</sup> and is scheduled for initiation on: July 2005</b>
<b>If RLCR is not complete or initiated, what data will be used to plan the work activities?</b>	See attached Contact Record dated 3/26/03	
<b>Activity requires modification to the ARARs listed in the RSOP.</b>	<input type="checkbox"/>	<b>Yes, <i>attach to letter</i></b>
	<input checked="" type="checkbox"/>	<b>No</b>
<b>Attach Administrative Record file requirements for the activity.</b> Attached		
<b>Point of contact for each facility/activity:</b> Cameron Freiboth		
<b>Duration of work activities:</b> 8 weeks <b>Anticipated work start:</b> June 27, 2005		
<b>Attach schedule for each facility or activity for information purposes.</b> Attached		
<b>Does the activity involve removing contaminated portions of the building shell? Include a description of the activity, contamination levels and controls</b>	<input type="checkbox"/>	<b>Yes, <i>LRA consultation and concurrence required</i></b>
	<input checked="" type="checkbox"/>	<b>No</b>

\* A closure plan is submitted pursuant to the RSOP for the Consolidated Water Treatment Facility, which meets the substantive elements of a closure description document.

<sup>1</sup> Evaluate using DPP, Sections 1.1.4 and 1.1.5 and the consultative process to implement activities

## RSOP for Component Removal, Size Reduction, and Decontamination Activities Checklist

Are there deviations/exceptions to the RSOP for the proposed activity(ies)?											<input type="checkbox"/>	Yes		
											<input checked="" type="checkbox"/>	No		
Provide an explanation of deviation/exception to the RSOP: Not applicable														
C. Check the appropriate resulting action box below														
Additional RFCA decision document required (PAM – IM/IRA)														
Major modification to RSOP							Field change to RSOP							
Minor modification to RSOP							LRA consultation							
Activity(ies) will result in the following waste types												Process waste		
										<input checked="" type="checkbox"/>		Remediation waste		
<input type="checkbox"/>	TRU	<input checked="" type="checkbox"/>	X	LLW	<input checked="" type="checkbox"/>	X	LLMW	<input type="checkbox"/>	Haz.	<input checked="" type="checkbox"/>	X	Sanitary	<input type="checkbox"/>	Other: recyclable/re-use
LRA Notification Review Time							<input checked="" type="checkbox"/>	14 days, no RCRA unit closure involved						
							<input type="checkbox"/>	30 days, RCRA unit closure involved						

<p align="center"><b>FACILITY COMPONENT REMOVAL, SIZE REDUCTION, AND DECONTAMINATION ACTIVITY CHECKLIST</b></p>
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**Building:** 891  
**Closure Project Manager:** Cameron Freiboth

**COMPONENT REMOVAL/SIZE REDUCTION**

Component Type	✓
Gloveboxes	
Tanks and ancillary equipment (located both inside and outside the facility)	✓
Fume hoods	
Ventilation/filtration systems (both inside and outside the facility)	✓
Utilities and other equipment (both inside and outside the facility; including electrical, steam, and fire suppression systems)	✓
Walls	
Floors	
Ceilings	
Roofs	
Other structural members	
Other*	

Removal/Size Reduction Technique	✓
Small tools	✓
Paving breaker, jackhammer and/or similar tools used to break up concrete	
Excavators, such as backhoes, to excavate underground components, such as tanks and ancillary equipment	
Hoists and cranes	
Plasma arc cutter	
Diamond wire saw	
Wachs cutter	
Laser cutter	
Oxy-torch cutter	
Hydraulic shears	
Shear baler	
Water cutter using abrasives	
Arc air slice	
Arbor press	
Non-explosive cracking agent	
Other *	

\* Describe "Other" Component Type(s) and/or Removal/Size Reduction Technique(s):

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**FACILITY COMPONENT REMOVAL, SIZE REDUCTION, AND DECONTAMINATION  
ACTIVITY CHECKLIST**

**DECONTAMINATION**

<b>Component Type</b>	<b>✓</b>
Gloveboxes	
Tanks and ancillary equipment (located both inside and outside the facility)	✓
Fume hoods	
Ventilation/filtration systems (both inside and outside the facility)	✓
Utilities and other equipment (both inside and outside the facility; including electrical, steam, and fire suppression systems)	
Walls	✓
Floors	✓
Ceilings	
Roofs	
Other structural members	✓
Other*	

<b>Decontamination Technique</b>	<b>✓</b>
Wiping/scrubbing/washing with water or detergents	✓
Vacuuming	✓
Strippable Coating	
Grinding	
Scarifying	
Scabbling	
Paving breaker/chipping hammer	
Spalling	
Abrasive/grit blasting	
CO <sub>2</sub> blasting	
Hydrolasing	
Strong mineral acids	
Organic or weak acids	
Additional oxidants, such as cerium and other similar metals	
Other *	

\* Describe "Other" Component(s) and/or Decontamination Technique(s):

Note: In the event a planned activity falls outside the scope of this RSOP, the closure project manager will consult with DOE and the LRA to determine whether this RSOP should be modified to include the activity, or whether a separate decision document should be written.

Prepared by: Kimberly L. Myers

Date: June 1, 2005

### **Administrative Record Requirements for this Activity**

- Final Rocky Flats Cleanup Agreement (RFCA)
- RFETS Decommissioning Program Plan (DPP)
- RFCA Standard Operating Protocol for Component Removal, Size Reduction, and Decontamination Activities
- Notification Letter and subsequent CDPHE correspondence, if appropriate
- Contact Records as applicable

**Closure Plan**  
**For the Consolidated Water Treatment Facility,**  
**Building 891**



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## **1.0 INTRODUCTION**

### **1.1 Purpose and Scope**

Part 3.4 of the Rocky Flats Closure Agreement (RFCA) Standard Operating Protocol for the Consolidated Water Treatment Facility (CWTF): Treatment and Disposal of Remediation Derived Wastewaters (November 2003), addresses closure of this unit. Closure of the unit is subject to the substantive requirements of a Closure Description Document, to address the plant's management of hazardous waste.

This Closure Plan applies to the treatment units in T900A, T900B, and in Building 891 proper.

## **2.0 METHOD OF CLOSURE AND PERFORMANCE STANDARD**

The CWTF (at Building 891), described herein will be closed following guidance in Part X.D.2 for Unit Removal.

## **3.0 SYSTEM DESCRIPTION AND WASTE CHARACTERIZATION**

The CWTF is located in the southeast area of the Industrial Area of the Site. Building 891 is a single story engineered metal structure. The building was built in 1991 and the early mission was treatment of groundwater from OU 1, located south and east of Building 881. In 1995, the treatment unit for OU 2 (T900A and T900B) was combined with the unit at Building 891. At this point in time the unit was renamed the CWTF, and through regulatory approval, began treating various waters generated at RFETS. At various times in the history of the CWTF, approval was given to treat water containing RCRA F-listed wastes.

At the inlet to the CWTF there is a Granulated Activated Carbon (GAC) unit to remove most organics that cannot be treated in the CWTF. T900A and T900B, the first portion of the treatment process are trailer-mounted chemical precipitation/microfiltration system designed primarily for the removal of metal contaminants. The solids were removed from the filter press, packed in drums, and disposed of as LLMW (EPA Codes F001, F002). However, after the unit treated groundwater from a remediation project conducted in 2004, contaminated with carbon tetrachloride, the solids also had the EPA code U211 applied. The liquid was pumped to a neutralization tank or recirculated through the precipitation/microfiltration system.

The next operation was the UV/peroxide oxidation unit where hydrogen peroxide was injected to oxidize the volatile organic compounds (VOCs). The liquid then passed through a GAC unit, which removed VOCs that were not adequately broken down by the previous treatment. After the GAC tank was a carbon dioxide injection system that converted metal sulfates to carbonates, to increase the efficiency of metals removal in the ion exchange treatment.

The ion exchange treatment system consisted of four ion exchange columns in series, with a degasification tower to remove carbon dioxide. The liquid first flowed into a strong base anion exchange column, which primarily removed uranium. The second step was a weak acid cation exchange column, which removed alkalinity associated with hardness. The degasification tower, next in line, removed carbonic acid produced as a byproduct of the weak acid column. The liquid then flowed into a strong acid

cation exchange column, which removed metals and excess hardness. The final step was a weak base anion exchange column for the removal of free mineral acidity.

The ion exchange unit was regenerated on a routine basis, with the cation units regenerated with hydrochloric acid and the anion units regenerated with sodium hydroxide. The waste stream, a combination of acid and base, was neutral for pH, but was normally characteristically hazardous for metals.

The treated effluent was then pumped into one of three effluent tanks, sampled and analyzed before release. If the effluent water met the standards, it was discharged directly to the South Interceptor Ditch. If the effluent water did not meet the effluent standards, it would be reintroduced to the treatment system.

#### **4.0 SPECIFIC CLOSURE ACTIVITIES**

Activities will be designed to achieve the closure performance standard, protect human health and the environment, and minimize waste. Specific work instructions will be developed prior to start of closure activities. These instructions will be developed in accordance with applicable RFETS policies and procedures.

#### **5.0 DISPOSITION OF CLOSURE WASTES**

The initial GAC unit, the chemical precipitation/microfiltration units in T900A and T900B, the UV/peroxide unit, and the next GAC unit will be disposed of as LLMW, with EPA codes F001, F002, and U211. The remainder of the treatment unit will be disposed of as LLW.

#### **6.0 SOIL CONTAMINATION EVALUATION AND POST CLOSURE CARE**

This unit has maintained an operating history (e.g., inspection logs, ECATS and occurrence reports) that indicates there have been no spills or releases to the environment as a result of waste managed activities in this unit. The closure activities for this unit will not impact the soils surrounding Building 891. Therefore, soil contamination will be evaluated as part of the building demolition and environmental restoration activities conducted under RFCA. Post-closure care activities are not necessary as part of the closure for this treatment unit.

#### **7.0 AMENDMENT OF THE CLOSURE DESCRIPTION DOCUMENT**

In conducting closure activities, unexpected events that are identified during implementation of closure activities may require an amendment to this RSOP Notification. Modifications to this RSOP Notification will be made in accordance with applicable regulations.

Activity ID	Activity Description	Orig Dur	Rem Dur	% Comp	Current Early Start	FY05											
						JUN				JUL				AUG			
						6	13	20	27	4	11	18	25	1	8	15	22
<b>Sector 07</b>																	
<b>Subsector 07C - 891 Area</b>																	
<b>891-T-200 - Haz Wste Untreated Water Storage Tk</b>																	
TK89100100	891 T-200 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
TK89100106	891 T-200 Demo Wk Pckg	4	4	0	29JUN05												
TK89100500	891 T-200 Cease Operations/Evacuate	0	0	0	05JUL05												
TK89100110	891 T-200 Mech Utility Isolations	2	2	0	05JUL05												
TK89100600	891 T-200 RTW Demo/Loadout	0	0	0	07JUL05												
TK89100700	891 T-200 Demo/Loadout	2	2	0	07JUL05												
<b>891-T-201 - T-201 Influent Tk OU-1 (15,000 gal)</b>																	
89101100	891 T-201 Mech Utility Isolations Wk Pckg	8	8	0	20JUN05												
89101106	891 T-201 Demo Wk Pckg	4	4	0	29JUN05												
89101500	891 T-201 Cease Operations/Evacuate	0	0	0	05JUL05												
89101110	891 T-201 Mech Utility Isolations	2	2	0	05JUL05												
89101600	891 T-201 RTW Demo/Loadout	0	0	0	07JUL05												
89101700	891 T-201 Demo/Loadout	6	6	0	12JUL05												
<b>891-T-202 - Ion Exch Water Tk OU-1 (15,000 gal)</b>																	
89102100	891 T-202 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89102106	891 T-202 Demo Wk Pckg	4	4	0	29JUN05												
89102500	891 T-202 Cease Operations/Evacuate	0	0	0	05JUL05												
89102110	891 T-202 Mech Utility Isolations	2	2	0	05JUL05												
89102600	891 T-202 RTW Demo/Loadout	0	0	0	07JUL05												
89102700	891 T-202 Demo/Loadout	6	6	0	21JUL05												
<b>891-T-203 - Influent Equal Tk OU-1 (15,000 gal)</b>																	
89103100	891 T-203 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89103106	891 T-203 Demo Wk Pckg	4	4	0	29JUN05												
89103500	891 T-203 Cease Operations/Evacuate	0	0	0	05JUL05												
89103110	891 T-203 Mech Utility Isolations	2	2	0	05JUL05												
89103600	891 T-203 RTW Demo/Loadout	0	0	0	07JUL05												
89103700	891 T-203 Demo/Loadout	2	2	0	02AUG05												
<b>891-T-204 - Clean Water Tank OU-1 (15,000 gal)</b>																	
89104100	891 T-204 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89104106	891 T-204 Demo Wk Pckg	4	4	0	29JUN05												
89104500	891 T-204 Cease Operations/Evacuate	0	0	0	05JUL05												
89104110	891 T-204 Mech Utility Isolations	2	2	0	05JUL05												
89104600	891 T-204 RTW Demo/Loadout	0	0	0	07JUL05												
89104700	891 T-204 Demo/Loadout	2	2	0	04AUG05												
<b>891-T-205 - CWTF Water Tk OU-1 (159,000 gal)</b>																	
89105100	891 T-205 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89105106	891 T-205 Demo Wk Pckg	4	4	0	29JUN05												
89105500	891 T-205 Cease Operations/Evacuate	0	0	0	05JUL05												
89105110	891 T-205 Mech Utility Isolations	2	2	0	05JUL05												
89105600	891 T-205 RTW Demo/Loadout	0	0	0	07JUL05												
89105700	891 T-205 Demo/Loadout	2	2	0	09AUG05												
<b>891-T-206 - CWTF Water Tk OU-1 (159,000 gal)</b>																	
89106100	891 T-206 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89106106	891 T-206 Demo Wk Pckg	4	4	0	29JUN05												
89106500	891 T-206 Cease Operations/Evacuate	0	0	0	05JUL05												
89106110	891 T-206 Mech Utility Isolations	2	2	0	05JUL05												
89106600	891 T-206 RTW Demo/Loadout	0	0	0	07JUL05												
89106700	891 T-206 Demo/Loadout	2	2	0	11AUG05												
<b>891-T-207 - CWTF Water Tk OU-1 (159,000 gal)</b>																	
89107100	891 T-207 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
89107106	891 T-207 Demo Wk Pckg	4	4	0	29JUN05												
89107500	891 T-207 Cease Operations/Evacuate	0	0	0	05JUL05												
89107110	891 T-207 Mech Utility Isolations	2	2	0	05JUL05												
89107600	891 T-207 RTW Demo/Loadout	0	0	0	07JUL05												
89107700	891 T-207 Demo/Loadout	2	2	0	16AUG05												
<b>891 - Ground Water Treatment Facility OU-1</b>																	
1FD891100	B891 Mech Utility Isolations Wk Pckg	4	4	0	27JUN05												
1FD891500	B891 Cease Operations/Evacuate	0	0	0	05JUL05*												
1FD891110	B891 Mech Utility Isolations	2	2	0	05JUL05												
1FD891140	B891 Type 2 RLC/PDS Survey/Submit/Approv	12	12	0	05JUL05												
1FD891115	B891 Demo Permit	8	8	0	07JUL05												
1FD891102	B891 Ele/Pwr Utility Isolations Wk Pckg	4	4	0	12JUL05												
1FD891104	B891 Alarm/Telecom Utility Isolations Wk Pckg	4	4	0	12JUL05												
1FD891106	B891 Demo Wk Pckg	4	4	0	19JUL05												
1FD891120	B891 Elec/Pwr Utility Iso Strip Haz Waste	4	4	0	19JUL05												
1FD891130	B891 Telecom/Alarms Isolations	4	4	0	19JUL05												
1FD891600	B891 RTW Demo/Loadout	0	0	0	26JUL05												
1FD891700	B891 Demo/Loadout	16	16	0	26JUL05												
1FD891800	B891 Soil Remediation	10	10	0	23AUG05												

Start Date 01FEB99  
Finish Date 29MAR06  
Data Date 31MAY05  
Run Date 06JUN05 07:41

PODC

Sheet 1 of 2

**RISS Program  
Sector Closure Schedule**

Activity ID	Activity Description	Orig Dur	Rem Dur	% Comp	Current Early Start	FY05													
						JUN				JUL				AUG					
						10	6	13	20	27	4	11	18	25	1	8	15	22	29
+ Cargo + Other Containers to be shipped																			
		58	58	0	31MAY05														
Culvert Removal/Final Grd/Reveg																			
1GEPER6024	Final Grade / Reveg - Subsector 7C	10	10	0	31AUG05														
+ 900A-Trailer-OU-2 Office/Surface Water Treatment																			
		14	14	0	05JUL05														
+ 900B-Trailer-OU-2 Office/Surface Water Treatment																			
		16	16	0	05JUL05														
Tank - T-20 Sulfuric Acid , NDT 1963 So of 891																			
1FDTK20500	TK20 Cease Operations/Evacuate	0	0	0	05JUL05														
1FDTK20140	TK20 WRE	12	12	0	05JUL05														
1FDTK20100	TK20 Mech Utility Isolations Wk Pckg	4	4	0	14JUL05														
1FDTK20106	TK20 Demo Wk Pckg	4	4	0	19JUL05														
1FDTK20110	TK20 Mech Utility Isolations	2	2	0	21JUL05														
1FDTK20600	TK20 RTW Demo/Loadout	0	0	0	26JUL05														
1FDTK20700	TK20 Demo/Loadout	4	4	0	26JUL05														
Tank - T-21 Sulfuric Acid NDT 1964 So of 891																			
1FDTK21500	TK21 Cease Operations/Evacuate	0	0	0	05JUL05														
1FDTK21140	TK21 WRE	12	12	0	05JUL05														
1FDTK21100	TK21 Mech Utility Isolations Wk Pckg	4	4	0	14JUL05														
1FDTK21106	TK21 Demo Wk Pckg	4	4	0	19JUL05														
1FDTK21110	TK21 Mech Utility Isolations	2	2	0	21JUL05														
1FDTK21600	TK21 RTW Demo/Loadout	0	0	0	26JUL05														
1FDTK21700	TK21 Demo/Loadout	4	4	0	26JUL05														
TK149-Liquid Wast Chromium St Tank (W of 452)																			
TK149110	TK149 Mech Utility Isolations	2	1	0	09MAY05A														
TK149600	TK149 RTW Demo/Loadout	0	0	0	06JUN05*														
TK149700	TK149 Demo/Loadout	2	2	0	06JUN05														
Tank - T-22 Sulphuric Acid NDT 1965 So of 891																			
1FDTK22500	TK22 Cease Operations/Evacuate	0	0	0	05JUL05*														
1FDTK22140	TK22 PRE	12	12	0	05JUL05														
1FDTK22100	TK22 Mech Utility Isolations Wk Pckg	4	4	0	14JUL05														
1FDTK22106	TK22 Demo Wk Pckg	4	4	0	19JUL05														
1FDTK22110	TK22 Mech Utility Isolations	2	2	0	21JUL05														
1FDTK22600	TK22 RTW Demo/Loadout	0	0	0	26JUL05														
1FDTK22700	TK22 Demo/Loadout	4	4	0	26JUL05														
TK359 - Waste Water Storage Tank OU2																			
TK359100	TK359 Mech Utility Isolations Wk Pckg	4	4	0	29JUN05														
TK359500	TK359 Cease Operations/Evacuate	0	0	0	05JUL05														
TK359106	TK359 Demo Wk Pckg	4	4	0	05JUL05														
TK359140	TK359 WRE	4	4	0	05JUL05														
TK359110	TK359 Mech Utility Isolations	2	2	0	07JUL05														
TK359600	TK359 RTW Demo/Loadout	0	0	0	12JUL05														
TK359700	TK359 Demo/Loadout	4	4	0	12JUL05														
TK360 - Waste Water Storage Tank OU2																			
TK360100	TK360 Mech Utility Isolations Wk Pckg	4	4	0	29JUN05														
TK360500	TK360 Cease Operations/Evacuate	0	0	0	05JUL05														
TK360106	TK360 Demo Wk Pckg	4	4	0	05JUL05														
TK360140	TK360 WRE	4	4	0	05JUL05														
TK360110	TK360 Mech Utility Isolations	2	2	0	07JUL05														
TK360600	TK360 RTW Demo/Loadout	0	0	0	12JUL05														
TK360700	TK360 Demo/Loadout	4	4	0	12JUL05														
+ Utility Closure/Conversions																			
		79	79	0	05JUL05														

## ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE REGULATORY CONTACT RECORD

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**Date/Time:** 3/26/03 – 1400 p.m.

**Site Contact(s):** D. A. Parsons (D&D) – (DAP-011)  
**Phone:** (303) 966-6458

**Regulatory Contact:** David Kruchek, CDPHE  
**Phone:** (303) 692-3328

**Agency:** CDPHE

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**Purpose of Contact:** Facility Anticipated Typing Reclassifications

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### Meeting Attendance

D. Parsons, RISS  
K. Wiemelt, K-H

D. Kruchek, CDPHE  
E. Bryson, RFFO

J. Hindman, CDPHE  
S. Tower, RFFO

### Discussion

During the weekly RISS Area Status meeting held on Wednesday afternoon, 3/26/03, Duane Parsons (RISS) discussed the attached proposed Facility Anticipated Typing Reclassification table. The attached table lists buildings that have not yet undergone a reconnaissance level characterization (RLC), and a justification for changing the anticipated facility Typing prior to the RLC. Based on a suggestion from Steve Tower (RFFO) several weeks ago, additional information was gathered on the buildings listed below, and the attached table was developed.

Based upon the additional information gathered, it was determined that some facilities should be changed from an anticipated Type 1 facility to an anticipated Type 2 facility, prior to the performance of the RLC. Likewise, based upon the additional information gathered, it was determined that some facilities should be changed from an anticipated Type 2 facility to an anticipated Type 1 facility, prior to the performance of the RLC.

Based on discussions of the attached table, it was determined that the following facilities should be changed from anticipated Type 1 facilities to anticipated Type 2 facilities prior to the performance of the RLC: Buildings 122, T122A, 891, T900A, T900B, and the 331 Garage. Refer to the attached table for the justifications for these re-typings. It was also discussed and agreed upon that any floor coverings and potentially contaminated equipment and/or systems that are not an integral part of these buildings (i.e., 122, T122A, 891, T900A, T900B, and the 331 Garage) will be removed from the buildings prior to the performance of the RLC. For example process waste drains embedded within the slab will remain; but carpet, floor tiles, loose equipment, and above-slab tanks and piping with potential low-levels of contamination will be removed prior to the RLC. In-process characterization will be performed prior to and during removal of the non-integral parts (e.g., floor coverings, equipment, systems, etc) of these buildings, as necessary to characterize this waste and to identify possible contamination in the buildings. Any elevated in-process characterization results will be provided to CDPHE and DOE. Once the floor coverings and potentially contaminated equipment and/or systems are removed, a combination RLC/PDS Type 2 characterization will be performed.

Based on discussions of the attached table, it was determined that the following facilities should be changed from anticipated Type 2 facilities to anticipated Type 1 facilities prior to the performance of the RLC: Buildings 664, 988A, 995-CCC-1, 995-CCC-2, 995-C-5, 995-EC1, 995-EC2, 995-EC3, 995-IC1, 995-IC2, 995-IC3, 790, 903A2, 906, 964, 569, and 570. Refer to the attached table for the justifications for these re-typings. It was also discussed and agreed upon that the Type 1 RLC of these buildings would be a more robust RLC than normal (i.e., more than the minimum amount of surveys and samples would be performed during the RLC of these buildings to ensure that adequate coverage is achieved in order to make appropriate final Typing and waste disposal decisions).

Based on discussions of the attached table, it was determined that Buildings 566 and 566A should be undergo additional in-process characterization surveys inside the ventilation ducting and remaining process waste piping. Then, based upon the in-process characterization surveys, evaluate if the 566 and 566A buildings should be reclassified to anticipated Type 1 facilities prior to the performance of the RLC. Once the Building 566 and 566A in-process characterization surveys are obtained, the results of the surveys will be presented to RFFO and CDPHE at a future date.

Based on discussions of the attached table, it was determined that the RLC of the 750 Pad Tents (Tents 2, 3, 4, 5, 6, 12 and 15) would be performed as a combination Type 2 RLC/PDS once all of the waste and equipment was removed from inside the tents (including the removal of the Tent 5 permacon). The 750 Pad Tents will remain as Type 2 facilities at least until the combination Type 2 RLC/PDS is completed.

Based on discussions of the attached table, it was determined that since T664B and T664C buildings are reusable, portable, modified semi-trailers, that they could be unconditionally released utilizing the Property Release Evaluation (PRE) process. Additionally, since S750 building was a small, skid-mounted portable shed, it could also be unconditionally released utilizing the PRE process. Therefore, an RLC is not required for buildings T664B, T664C or S750.

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**Contact Record Prepared By: D. A. Parsons**

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**Required Distribution:**

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E. Bryson, RFFO  
K. Wiemelt, K-H



The following two tables list buildings, and the justifications, for changing the "anticipated Typing" classification prior to the performance of the reconnaissance level characterization. Table 1 lists the facilities, and their justifications, for changing these buildings from "anticipated Type 1" to "anticipated Type 2" classifications. Table 2 lists the facilities, and their justifications, for changing these buildings from "anticipated Type 2" to "anticipated Type 1" classifications.

**Table 1 – Change from Anticipated Type 1 to Type 2 classification**

Facility	Justification
122	<p>During the fires in the 1950's and 1960's, contaminated personnel spread contamination throughout the original portions of B122. There are three (3) process waste drains in B122.</p> <p>Although B122 should be Type 2, the characterization of B122 should be handled similar to how B441 was characterized. Since the high potential areas are on the floor and are currently covered by floor tile and/or carpet, these coverings should be removed prior to characterization. The characterization could then be done as a combination RLC/PDS. The later additions to B122 (i.e., the south and north additions) are not expected to be contaminated.</p>
T122A	<p>This portable decontamination trailer next to B122. The trailer was installed in 1997, and has been used to decontaminate wounded personnel. Although the decontamination sink or shower is not contaminated, the drain piping and under-trailer process waste tanks are potentially contaminated.</p> <p>Since the only likely potentially contaminated areas of T122A are the sink and shower drain piping and under-trailer tank, this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
891	<p>B891 has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. The 891 sump is posted as a contamination area; however, the posting applies to a removable fiberglass liner in the sump that can be easily removed. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the B891 equipment.</p> <p>Since the levels of potential internal rad contamination in B891 are very low (pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
T900A	<p>T900A has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the T900A equipment.</p> <p>Since the levels of potential internal rad contamination in T900A are very low (pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
T900B	<p>T900B has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the T900B equipment.</p> <p>Since the levels of potential internal rad contamination in T900B are very low</p>

	(pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.
331 Garage	<p>The garage portion of B331 used to be a metallurgical R&amp;D laboratory during the 1950's and 1960's. Uranium and beryllium contamination were used and stored in B331 during this R&amp;D period. There are three to four (3-4) process waste drains in B331.</p> <p>Although B331 should be Type 2, the characterization of B331 should be handled similar to how B441 was characterized. Since the high potential areas are on the floor and are currently covered by floor tile and/or carpet, these coverings should be removed prior to characterization. The characterization should then be done as a combination RLC/PDS. The later additions to B331 (i.e., Fire Department area) are not expected to be contaminated and will be treated as a separate facility.</p>

**Table 2 – Change from Anticipated Type 2 to Type 1 Classification**

Facility	Justification
664	<p>B664 was built in 1972 and has been used a waste storage, preparation, staging, and shipping facility. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B664 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B664.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain, except asbestos.</p>
T664B and T664C	<p>T664B and T664C are modified semi-trailers used to house real-time radiographic equipment for counting waste drums prior to shipment, and were brought onsite in 2001. The facilities were never utilized as production facilities, and never contained known un-encapsulated radioactive or hazardous materials. T664B and T664C are not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facilities have shown no fixed or loose radioactive material. The only rad postings in the facilities are radioactive material storage areas. There are no old or new process waste systems associated with T664B or T664C.</p> <p>Once all of the radioactive waste containers are removed from the trailers, no residual radiological or non-radiological hazards should remain.</p>
S750	<p>Building S750 is a 48 square-foot skid mounted portable shed acquired in the early 1990's. The shed has aluminum siding and an aluminum roof, the floor is wood. This shed has been used as a storage shed for non-hazardous and non-radiological operation such as the site housekeeping services, food service organization and site maintenance organization. There is no history of any radiological or hazardous operations in the facility. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with S750.</p>

Tents 2, 3, 4, 6, & 12	<p>Tents 2, 3, 4, 6 and 12 were constructed in 1990 and have been used a waste storage, preparation, and staging facilities. The facilities were never utilized as a production facilities, and never contained known un-encapsulated radioactive or hazardous materials. Although the tents are on the "known beryllium area" list, routine surveys do not indicate the presence in the Tents. Minor spills have occurred on the Tent pad, but all spills were below reportable quantities and were cleaned up. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility, are radioactive material storage areas. There are no old or new process waste systems associated with the Tents.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p> <p>Note: Tent 5 contains a perma-con and will remain a Type 2.</p>
<p>988A, 995-CCC-1, 995-CCC-2, 995-C-5, 995-EC1, 995-EC2, 995-EC3, 995-IC1, 995-IC2, 995-IC3</p>	<p>Two waste streams are generated at the RFETS wastewater treatment plant, treated effluent and biosolids. For purposes of facility classification, those portions of the treatment process that have come into contact with the concentrated solids in the wastewater should be considered as anticipated Type 2 facilities (i.e., buildings 974 and 977, aeration basins 995-AB-1 and 995-AB-2; clarifier basins 995-C-1, 995-C-2, 995-C-3, 995-C-4, and digesters 995-D1 and 995-D2).</p> <p>—</p> <p>Units that come into contact with raw sewage and effluent only should be considered as anticipated Type 1 facilities (i.e., building B988A, chlorine contact basins 995-CCC-1 and 995-CCC-2, clarifier basin 995-C-5; effluent cells 995-EC-1, 995-EC-2, and 995-EC-3; and influent cells 995-IC-1, 995-IC-2, and 995-IC-3). Raw sewage may carry contaminants, but the concentration of solids is extremely low, generally less than 0.5%. As solids are concentrated in the treatment process through the clarifiers and digesters, there is the potential for contaminants to be concentrated.</p> <p>All of these units should be reclassified as anticipated Type 1 facilities because they have only had contact with either raw sewage entering the treatment facility or treated wastewater just prior to release into the environment. Raw sewage is routinely analyzed for a number of operational parameters (pH, conductivity, suspended solids and others), and for a large suite of chemical parameters, including radionuclides, under various monitoring programs. There have been no recent incidents of contamination. The effluent is routinely monitored as well, and it routinely meets all requirements for release into the environment.</p> <p>B988A is the final disinfection step and monitoring point on the discharged effluent. CCC1 and 2 are the chlorine contact chambers, which have been out of service for several years (chlorination disinfection was replaced with UV disinfection), and have never had contact with any portion of the solids waste stream. C-5 is the tertiary clarifier, which receives only effluent from the secondary clarifiers and no solids. EC-1, 2, and 3 are the effluent storage cells, which have only had contact with treated effluent from the facility. Finally, the IC-1, 2, and 3 units are the influent storage cells, which come into contact with raw sewage only.</p> <p>The facilities were never utilized as production facilities. The facilities are not listed as a "known beryllium areas," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facilities have shown no fixed or loose radioactive material. There are no old or new process waste</p>

	<p>systems associated with these facilities.</p> <p>Once sewage treatment operations cease, there should no residual radiological or non-radiological hazards remaining.</p>
790	<p>Building 790 is a 6,768-sq. ft. single-story concrete building constructed in 1991. The building consists of three irradiation cells (A, B, and C) an instrument calibration support area, a control room, and an office area. Building 790 was designed and used as radiometric calibration facility. Specifically, it is used to expose thermoluminescent dosimeters (TLD) and calibrate site health physics instrumentation. This facility used and stored sealed sources and X-ray generating equipment.</p> <p>No hazardous chemicals are stored in Building 790, other than general cleaning supplies and small quantities (less than 1 pint) of alcohol and acetone to clean some instrument parts. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B790 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B790.</p> <p>Once all of the rad sources are removed from the building, no residual radiological or non-radiological hazards should remain. Sealed sources stored in Building 790 included, but are not limited to Pu, Am, Sr-90, Cf, Cs, Co-60, Ba, and Pm.</p>
566 and 566A	<p>Building 566 is a single structure divided in to a 13,700 sq. ft. Site Alarm Maintenance and Respirator Repair Facility. Building 556 was originally constructed to be the site laundry facility (1991). The laundry was only operational for about 2 years, was never approved to handle the highly contaminated laundry, and only laundered two (2) loads of potentially contaminated low-level laundry and numerous loads of clean modesty clothing. Building 566 has always housed the Respirator Cleaning and Repair Group. In 1999, the Alarms Maintenance Servicing Center moved into the building.</p> <p>Alarm maintenance involves cleaning equipment, replacing faulty components, and testing and inspecting equipment. The Respirator Cleaning and Repair area contains a respirator washers, fume hoods, laundry carts, and radioactivity monitoring equipment. Detergent, bleach and water are used in the respirator washing process. Wastewater drains into two storage tanks located in the Building 566 pit and is then pumped to the sanitary drain system. Building 566 had above-slab process waste lines connected to the washing machines. These lines have since been removed along with the washing machines, and the only remaining line has been cut and capped near the NE outer wall of 566. Respirators and Alarm equipment are surveyed for radioactivity (and beryllium as necessary) prior to being transported to Building 566 to ensure no loose contamination exists. In the late 1990s, the B566 washers and dryers were removed and the waste trench under the washers was surveyed. Only very low levels of contamination were found in the trench and the areas were decontaminated (using power washer).</p> <p>Building 556A is the filter plenum for the laundry ventilation system in Building 556.</p>

	<p>It is 4,000 sq. ft. and was constructed in 1991. In the late 1990s, the air filter plenum stages was surveyed and no radiological contamination was found and thus the radiological postings were removed from the plenum. Several pieces of ventilation equipment and ducting leading to the 566A plenums still have internal rad contamination labels, however it is believed that this labels are no longer valid.</p> <p>Based on the above information, and some additional in-process internal surveys of remaining ventilation equipment and process waste piping, it is very probable that 566 and 566A are not contaminated and could be reclassified to Type 1.</p>
903A2	<p>Building 903A2 is a 100 square-foot general storage shed acquired in 1993. This structure is a wood building with wood walls, wood floor and an asphalt shingle roof. This building sites on a concrete pad and is located west of the 903A Main Decontamination Facility (MDF). This building is used to store PPE and for general storage in support of the 903A MDF. There is no history of any radiological or hazardous operations in the facility. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with 903A2.</p>
906	<p>B906 was built in 1994 and has been used a TRU waste storage facility. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B906 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B906.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p>
964	<p>Building 964 is a 5,000 sq. ft. building and is currently identified as RCRA Unit 24. B964 was originally constructed in the mid-1960's and was used for general construction storage by a variety of site construction contractors. In 1986, the structure was modified for use as RCRA permitted Unit 24. These modifications include the installation of a spill containment system and the application of an epoxy concrete sealant. Ramps were installed to allow movement of containers in and out of the secondary containment system.</p> <p>The building currently stores solid wastes, but on occasions liquid waste has been stored in the building and was placed in metal secondary containment pans. Building 964 primarily stores solidified bypass sludge from Building 371. There have been no documented spills in B964.</p> <p>The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B964 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B964.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain, except asbestos.</p>

569	<p>Building 569, also known as the Crate Counting Facility, is a 7,620 sq. ft. single-story building constructed in 1987. B569 contains radioactivity assay equipment and temporary waste storage operations. B569 is also RCRA Unit 59. Containers of low-level, low-level mixed, transuranic and transuranic mixed waste are received from throughout the plant site and assayed using a passive-active counter. Containers are surveyed prior being accepted into B569. Containers whose contents meet the disposal site waste acceptance criteria are transported to Buildings 664, 440, or 906 for storage pending off-site shipment. Those containers not meeting the disposal site waste acceptance criteria, or which exhibit physical damage or improper packing, are identified for repackaging and sent back to the originating building. No unpacking or repackaging is performed in B569.</p> <p>The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B569 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B569.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p>
570	<p>Building 570 is the filter plenum facility for the Crate Counting Facility (569) and is a 683 sq. ft. building constructed in 1987. B570 has never been activated and has never housed any radiological or hazardous operation. Ventilation ducting leading from B569 to B570 was never connected, and has always been blank-flanged off. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with B570.</p>